

User guide

MBS



Table of content

1	Révision	3
2	Product introduction	4
2.1	Precaution before using battery.....	4
2.2	Charger	4
2.3	Notes.....	5
3	Installation instructions	6
3.1	Appearance.....	6
3.2	Install Micro SD and SIM cards	7
3.3	Battery charge.....	7
3.4	Buttons and function area display.....	8
4	Call function	9
4.1	Calling numbers	9
4.2	Contacts.....	9
4.3	SMS and MMS	9
5	Barcode Reader	10
6	NFC reader	11
7	Other functions	12
7.1	PING tool	12
7.2	Bluetooth.....	13
7.3	GPS	14
7.4	Volume setup	15
7.5	Sensor.....	15
7.6	Keyboard.....	16
7.7	Network.....	17
7.8	Keyboard emulator	18
8	Device characteristic	19

1 Revision

Description	Date	Version	Author	Check
First release	2021/02/09	1.3	CLO	YDA

2 Product introduction

2.1 Precaution before using battery

- Do not leave battery unused for long time, no matter it is in device or inventory. If battery has been used for 6 months already, it should be checked for charging function or it should be disposed correctly.
- The lifespan of Li-ion battery is around 2 to 3 years, it can be circularly charged for 300 to 500 times. (One full battery charge period means completely charged and completely discharged.)
- When Li-ion battery is not in use, it will continue to discharge slowly. Therefore, battery charging status should be checked frequently and take reference of the related battery charging information on the manuals.
- Observe and record the information of a new unused and non fully charged battery. On the basis of operating time of new battery and compare with a battery that has been used for long time. According to product configuration and application program, the operating time of battery would be different.
- Check battery charging status at regular intervals.
- When battery operating time drops below about 80%, charging time will be increased remarkably.
- If a battery is stored or otherwise unused for an extended period, be sure to follow the storage instructions in this document. If you do not follow the instructions, and the battery has no charge remaining when you check it, consider it to be damaged. Do not attempt to recharge it or to use it. Replace it with a new battery.
- Store the battery at temperatures between 5 °C and 20 °C (41 °F and 68 °F).

2.2 Charger

The charger output voltage/current is 5V DC/3A – 9V DC/2A – 12V DC/1.5A. The plug is considered as a disconnect device of the adapter.

2.3 Notes

Note 1:

Using the incorrect type of battery has danger of explosion. Please dispose the used battery according to instructions.

Note 2:

Due to the used enclosure material, the product shall only be connected to a USB Interface of version 2.0 or higher. The connection to so called power USB is prohibited.

Note 3:

The adapter shall be installed near the equipment and shall be easily accessible.

Note 4:

The suitable temperature for the product and accessories is 0-10°C to 50°C.

Note 5:

CAUTION RISK OF EXPLOSION IF BATTERY IS REPLACED BY AN INCORRECT TYPE.
DISPOSE OF USED BATTERIES ACCORDING TO THE INSTRUCTIONS.

3 Installation instructions

3.1 Appearance

MBS back and front appearances are showing as follows:

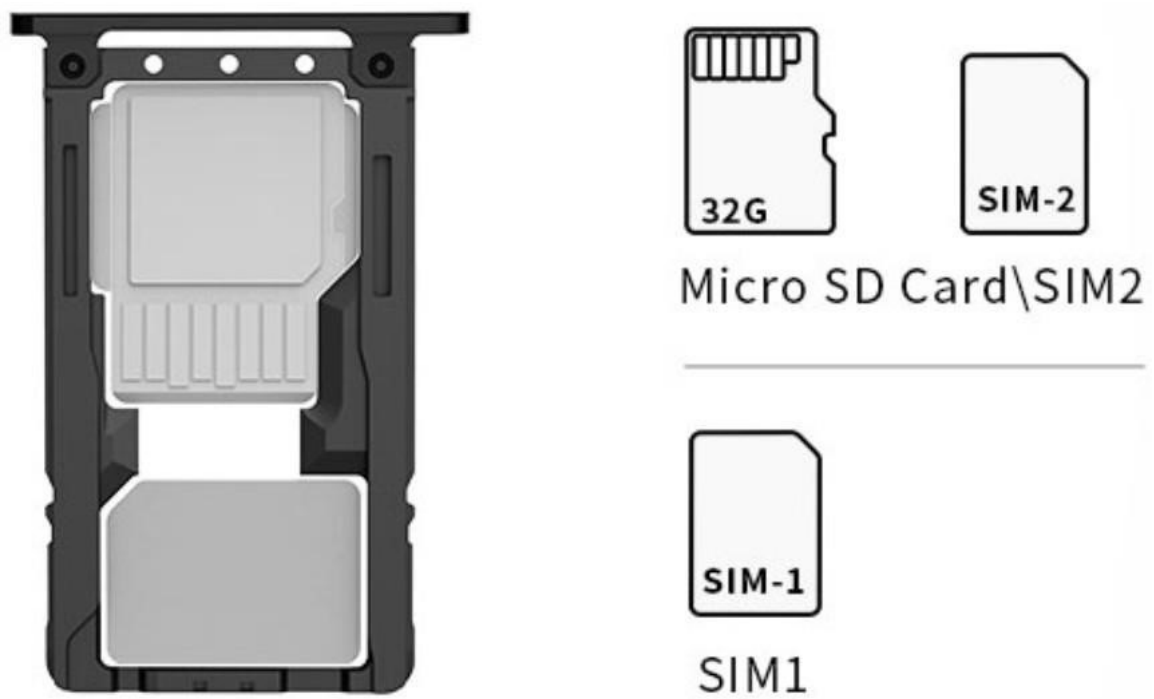


Buttons instruction

Button		Description
Side button	1. Power	Locate on right side, press to ON/OFF device.
	2. PTT key	Locate on right side, its function can be defined by software.
	3.SCAN	Scanning button located on both sides. There are two scanning buttons.
	4. Volume +/-	Volume up and down

3.2 Install Micro SD and SIM cards

The cards sockets are showing as follows:



3.3 Battery charge

By using USB Type-C contact, the original adaptor should be used for charging the device.
Make sure not to use other adaptors to charge the device.

3.4 Buttons and function area display

MBS has 6 side buttons, 2D scanning module locates on the top. HD camera and flashlight locate at rear. NFC identification surrounds the camera.



4 Call function

4.1 Calling numbers

1. Click icon .
2. Click number key to input phone numbers.
3. Click  icon to call.
4. Click  icon to end call.

4.2 Contacts

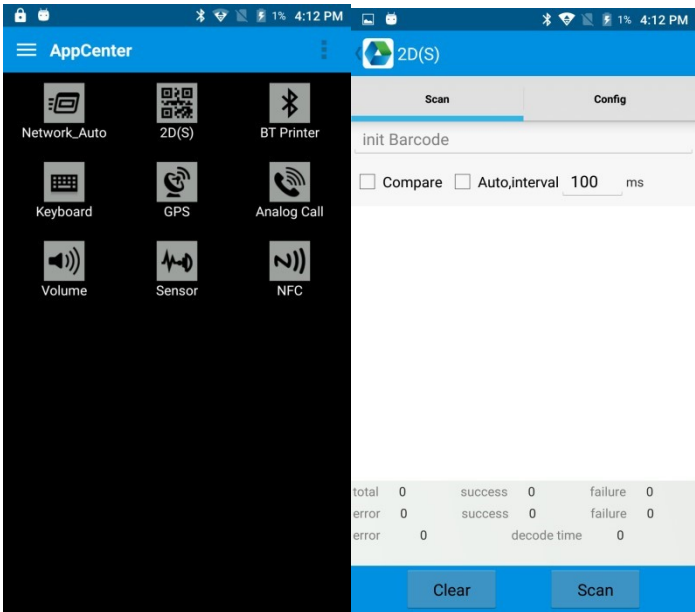
1. Click contacts to open contacts list.
2. Click icon  to add new contacts.
3. Click icon  to import/export contacts.

4.3 SMS and MMS

1. Click  to open message window.
2. Click  to input message receiver and contents.
3. Click  to send out messages.
4. Click  to add attachment pictures and videos.

5 Barcode Reader

- 1. In App Center open 2D barcode scan test.
- 2. Press “SCAN” button or click scan key to start scanning, the parameter “Auto interval” can be adjusted.



Caution: Please scan codes in correct way otherwise the scanning will failed.

2D code:



Correct



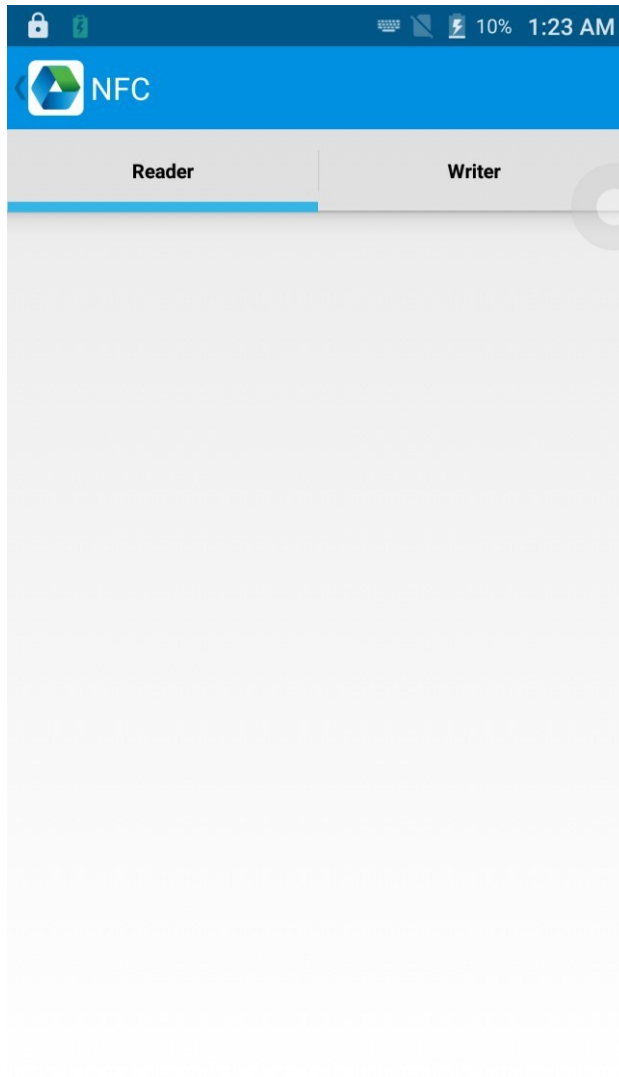
Incorrect



Max. radiant power: 0.6mW
Wave length: 655nm
IEC 60825-1 (Ed.2.0).
21CFR 1040.10 and 1040.11 standard.

6 NFC reader

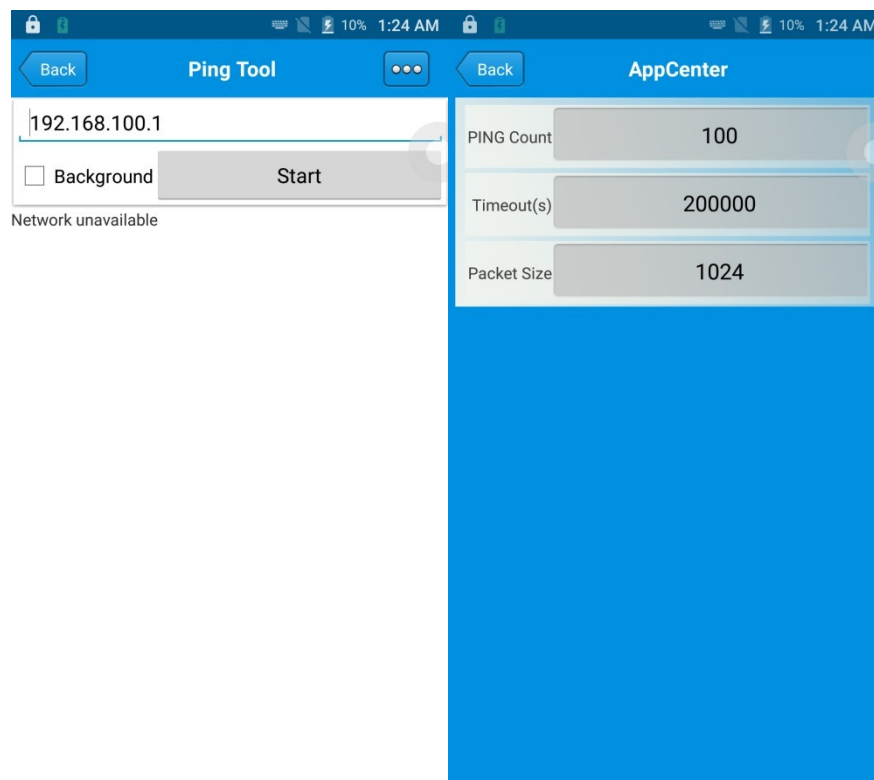
Click App Center, open “NFC” to read and write tag information.



7 Other functions

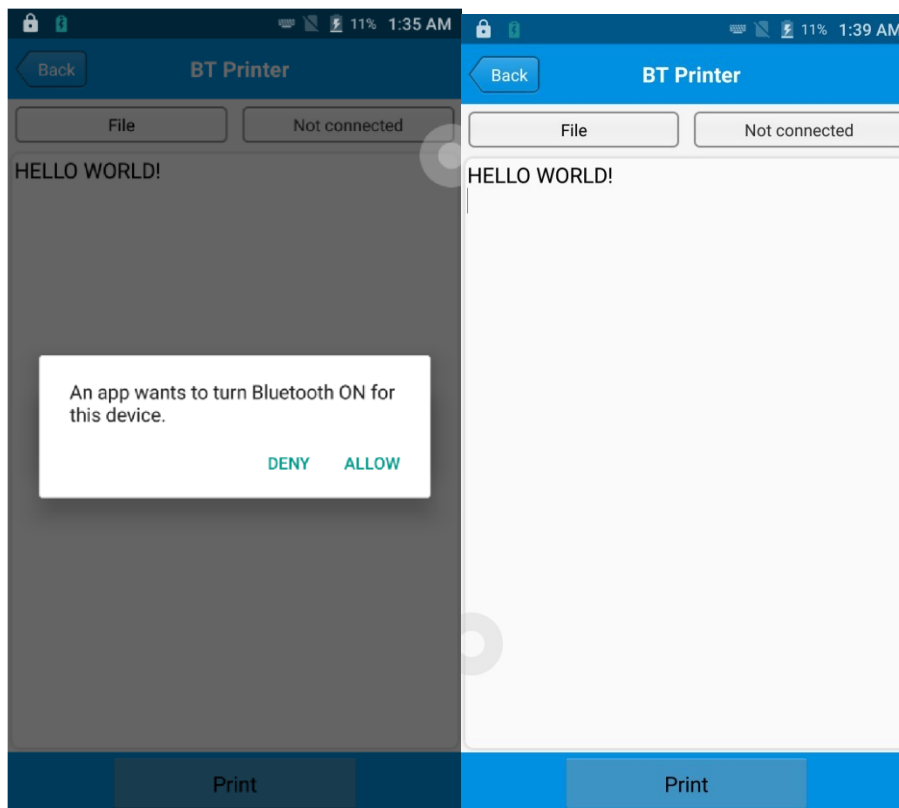
7.1 PING tool

1. Open “PING” in App Center.
2. Setup PING parameter and select external/internal address.



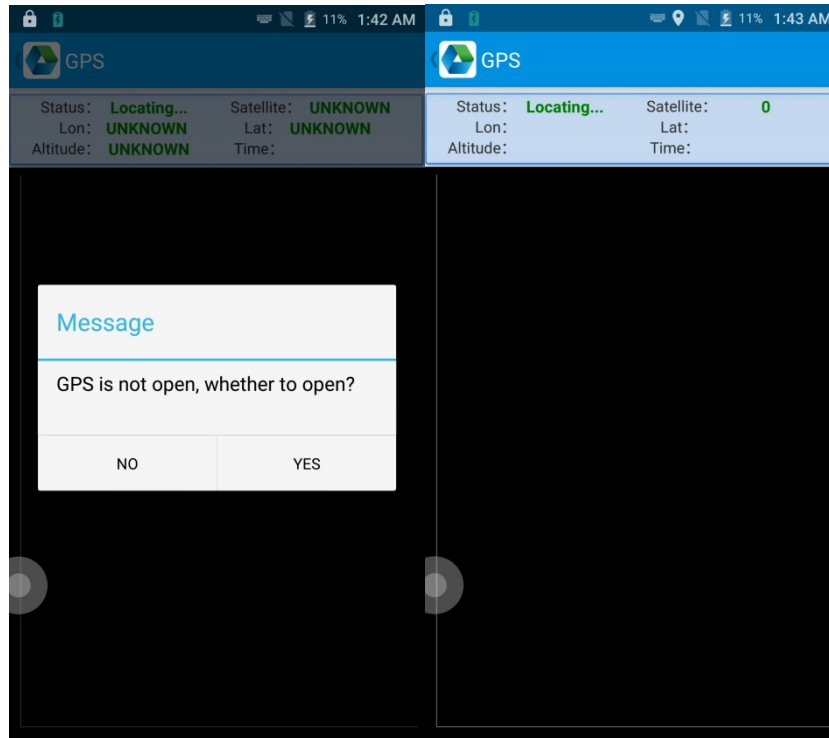
7.2 Bluetooth

1. Open “BT Printer” in App Center.
2. In the list of detected devices, click the device that you want to pair.
3. Select printer and click “Print”.



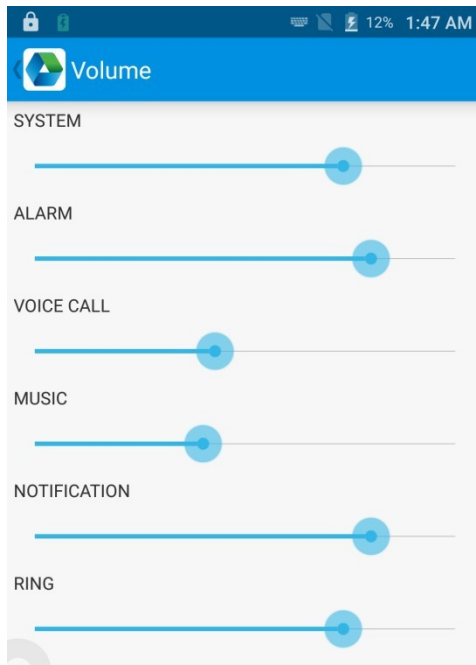
7.3 GPS

1. Click “GPS” in App Center to open GPS test.
2. Setup GPS parameters to access GPS information.



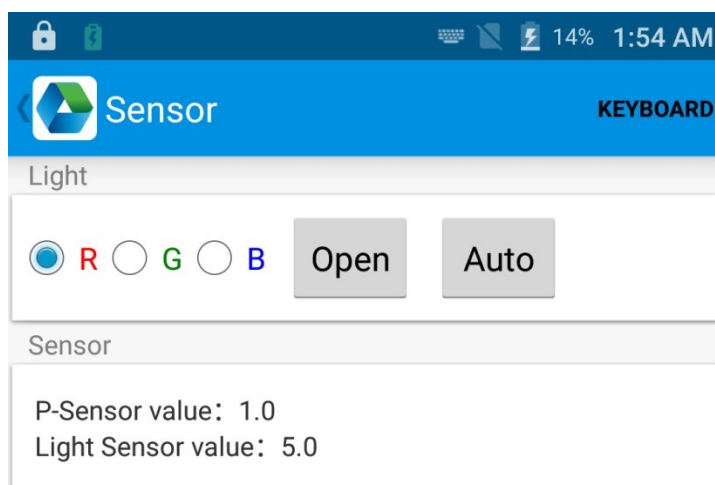
7.4 Volume setup

1. Click “Volume” in App Center.
2. Setup volume.



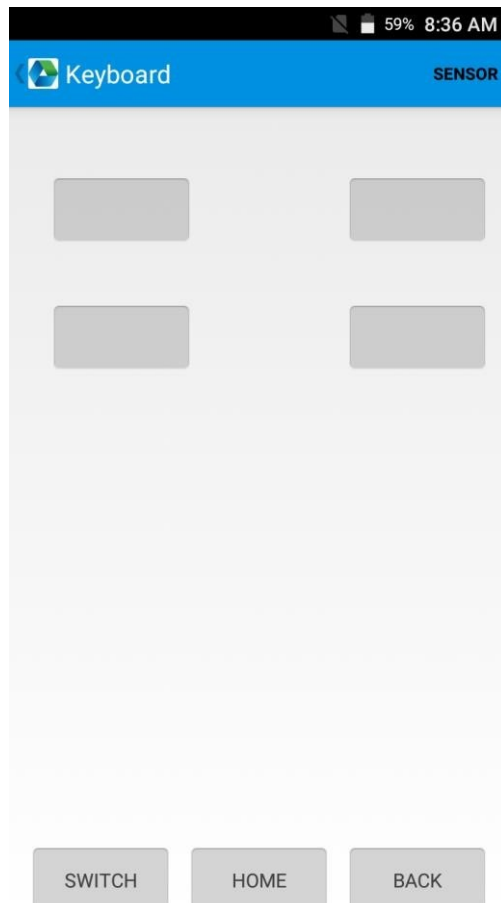
7.5 Sensor

1. Click “Sensor” in App Center.
2. Setup the sensor.



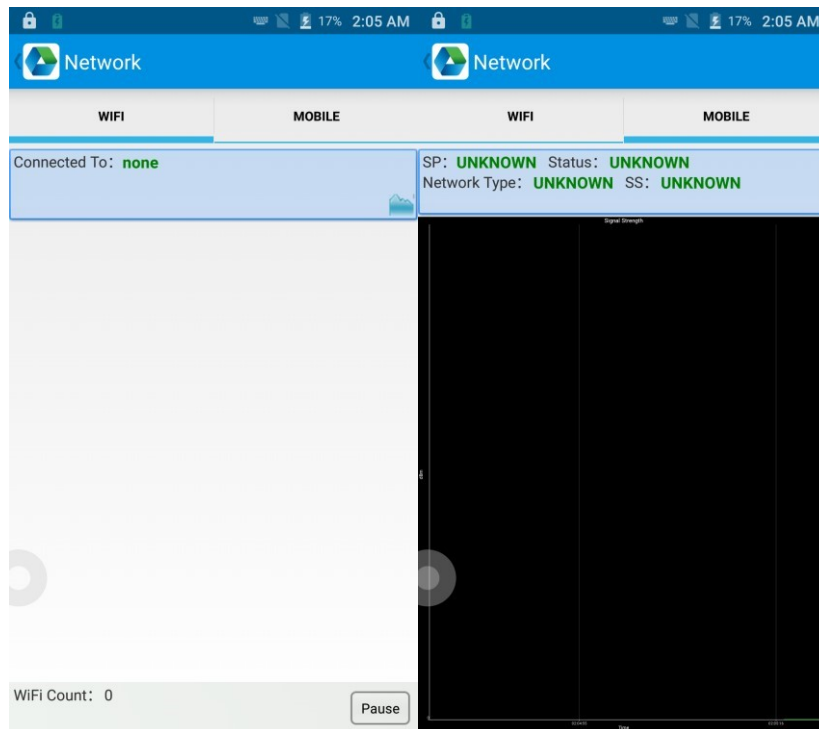
7.6 Keyboard

1. Click "Keyboard" in App Center.
2. Setup and test the main values of the device.



7.7 Network

1. Click “Network” in App Center.
2. Test WIFI/Mobile signal by requirements.



7.8 Keyboard emulator

The keyboard emulator can be used in multiple operating background and output formats directly. It includes Prefix/Suffix/Enter/TAB.

Please check Keyboard emulator manual for more details.



8 Device characteristic

Physical characteristics

Size	160x76x15.5mm / 6.3*2.99*0.61in
Weight	<287g/10.12oz(with battery)
Display	5.45-inch display, IPS LTPS 1440*720
Touch panel	Corning Gorilla Glass, multi-touch panel, gloves and wet hands supported
Battery	4300mAh removable main battery, 5200mAh optional pistol battery, support QC3.0 and RTC Standby: over 300 hours (only main battery) Continuous use: over 12 hours (depending on user environment) Charging time: 2.5hours (charge device by standard adaptor and USB cable)
Expansion	Supports up to 128 GB Micro SD card
Expansion Slot	2 slot for SIM card, 1 slot for TF card
Audio	2 Microphones, 1 for noise reduction
Camera	13MP autofocus camera with flashlight

Performance

CPU	Qualcomm Octa-core 1.8GHz / 2.0GHz
OS	Android 9.0
RAM	2GB / 3GB
Communication Interface	USB3.0, Type-C, OTG
ROM	16GB/32GB
Max. expansion	Supports up to 128 GB Micro SD card

User environment

Operating temp.	-20°C to 50°C
Storage Temp.	-40°C to 70°C
Humidity	5%RH - 95%RH non condensing
Sealing	IP65, IEC sealing standard

Drop specification	Multiple 1.5m/4.9ft drops (at least 20 times) to the concrete across the operating temperature range Multiple 2.4m/7.87ft drops (at least 20 times) to the concrete after installed rubber bumper
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Communication

WAN	EU/CH: 2G: 850/900/1800/1900MHz 3G: CDMA EVDO: BC0 WCDMA: 850/900/1900/2100MHz TD-SCDMA: A/F(B34/B39) 4G: B1, B3, B5, B7, B8, B20, B38, B39, B40, B41 US: 2G: 850/900/1800/1900MHz 3G: 850/900/1900/2100MHz 4G: B2, B4, B5, B7, B12, B17, B38
WLAN	Support 802.11 a/b/g/n/ac
Bluetooth	Bluetooth 4.2/4.1+HS/4.0/3.0+HS/2.1+EDR

Data collection

Barcode scanning	SE4710
RFID	NFC 13.56Mhz

Developing Environment

SDK	Software develop kit
Language	Java
Develop	Eclipse/Android Studio